

## APPENDIX C: TOOLS CHECKLISTS FOR DWAF FUNCTIONS

(For monitoring the use of appropriate tools)

### WATER RESOURCE MANAGEMENT

FUNCTION	POTENTIAL APPLICABLE TOOLS	WHICH TOOLS ARE RELEVANT/ REQUIRED?	WHICH TOOLS HAVE BEEN USED?	NON-COMPLIANCE DETAILS AND RECOMMENDATIONS
<b>Water resource infrastructure – Planning, Development and Operation</b>				
Construction, upgrading and maintenance of bulk water resource infrastructure	<ul style="list-style-type: none"> <li>• Guidelines for Standardised Environmental Management Plans for Water Resource Management Projects,</li> <li>• Environmental Implementation and Management Plan (EIMP),</li> <li>• Integrated Environmental Management Framework (IEMF),</li> <li>• Strategic Environmental Assessment (SEA),</li> <li>• Environmental Site Management and Rehabilitation Specifications (ESM&amp;RS),</li> <li>• Social Assessment and Development Framework (SAAD),</li> <li>• Auditing and Monitoring Protocol for Construction Sites (Construction EM&amp;AP).</li> </ul>			
Operations and Maintenance	<ul style="list-style-type: none"> <li>• Guidelines for Standardised Environmental Management Plans for Water Resource Management Projects,</li> <li>• IEMF,</li> <li>• check comment at checklist</li> <li>• ESM&amp;RS,</li> <li>• SAAD,</li> <li>• Construction EM&amp;AP.</li> </ul>			
Storage of waste and water containing waste	<ul style="list-style-type: none"> <li>• Guidelines for Standardised Environmental Management Plans for Water Resource Management Projects,</li> <li>• EIMP,</li> <li>• IEMF,</li> <li>• ESM&amp;RS,</li> <li>• SAAD,</li> <li>• Construction EM&amp;AP.</li> </ul>			
Stream flow reduction	Guidelines for Standardised			

activities	Environmental Management Plans for Water Resource Management Projects, EIMP, IEMF, EIA, ESM&RS, SAAD.			
Intentional recharge of an aquifer	<ul style="list-style-type: none"> <li>Guidelines for Standardised Environmental Management Plans for Water Resource Management Projects,</li> <li>EIMP,</li> <li>IEMF,</li> <li>ESM&amp;RS,</li> <li>SAAD.</li> </ul>			
Clearing activities: <ul style="list-style-type: none"> <li>Terrestrial (chemical, biological and mechanical)</li> <li>Aquatic (chemical, biological and mechanical)</li> <li>Vegetation and weeds</li> </ul>	<ul style="list-style-type: none"> <li>Guidelines for Standardised Environmental Management Plans for Water Resource Management Projects,</li> <li>EIMP,</li> <li>IEMF,</li> <li>ESM&amp;RS,</li> <li>SAAD.</li> </ul>			
<b>Policy and strategy development</b>				
Legislation and regulations	EIMP, IEMF, SAAD.			
National water resource strategy	EIMP, IEMF, SEA, SAAD.			
Catchment management strategy	EIMP, IEMF, SEA, SAAD.			
Pricing strategy	EIMP, IEMF, SAAD.			
<b>Water resource protection</b>				
Resource Directed Measures: national classification system, resource quality objectives	EIMP, IEMF, SAAD.			
Reserve determinations	EIMP, IEMF, SAAD.			
Source based controls	EIMP, IEMF, SAAD.			
Water conservation and demand management: Conservation plan for water resources	EIMP, IEMF, SEA, SAAD.			
<b>Controlling and regulating water use</b>				
Authorising and regulating water use	EIMP, IEMF, EIA, SEA, ESM&RS, SAAD.			
Waste management (permitting waste disposal sites)	IEMF, EIA, ESM&RS, SAAD.			
Setting water use charges	EIMP, IEMF, SAAD.			
Development of a waste discharge charge system	EIMP, IEMF, SAAD.			
<b>Authorising controlled activities</b>				
Atmospheric precipitation (Cloud seeding)	Guidelines for Standardised Environmental Management Plans for Water Resource Management Projects, IEMF, EIA, SAAD.			
Irrigation with waste water	Guidelines for Standardised			

	Environmental Management Plans for Water Resource Management Projects, IEMF, EIA, ESM&RS, SAAD.			
Power generation activity altering the flow regime of water resources (Eskom)	Guidelines for Standardised Environmental Management Plans for Water Resource Management Projects, EIMP, IEMF, EIA, SEA, ESM&RS, SAAD.			
Intentional recharge of an aquifer	Guidelines for Standardised Environmental Management Plans for Water Resource Management Projects, IEMF, EIA, ESM&RS, SAAD.			
Monitoring, evaluation and auditing	Guidelines for Standardised Environmental Management Plans for Water Resource Management Projects, EIMP, IEMF, EIA, SEA, ESM&RS, SAAD, Construction EM&AP, EM&AP, checklists.			

## WATER SERVICES

<b>FUNCTION</b>	<b>POTENTIAL APPLICABLE TOOLS</b>	<b>WHICH TOOLS ARE RELEVANT/ REQUIRED?</b>	<b>WHICH TOOLS HAVE BEEN USED?</b>	<b>NON-COMPLIANCE DETAILS AND RECOMMENDATIONS</b>
Water and sanitation programme via the development and implementation of water services business schemes	Environmental Impact Management System for Water Service projects (EIMS), EIMP, IEMF, SAAD.			
EIA for sanitation projects (responsibility of District councils' management)	EIMP, IEMF, EIA, ESM&RS, SAAD, Construction EM&AP.			
<b>Water services planning and development</b>				

<p>Construction, upgrading and maintenance of water supply infrastructure</p> <ul style="list-style-type: none"> <li>• Reservoirs</li> <li>• Oxidation ponds</li> <li>• Sewerage works</li> <li>• Stormwater</li> <li>• Outfall sewer</li> <li>• Pipelines</li> <li>• Purification works</li> <li>• Pumpstations</li> <li>• Reticulation works</li> <li>• Impeding and diverting the flow of water</li> <li>• Altering the bed, banks and characteristics of a watercourse</li> </ul>	EIMP, IEMF, EIA, ESM&RS, SAAD, Construction EM&AP.			
<p>Construction of on-site sanitation</p> <ul style="list-style-type: none"> <li>• Ventilated improved pit latrine (VIPs)</li> <li>• Urine Diversion Facilities</li> <li>• Septic tanks</li> <li>• French drains</li> </ul>	IEMF, EIA, ESM&RS, SAAD, Construction EM&AP.			
<b>Operation and maintenance of water related activities</b>				
Disposal of waste and water containing waste	IEMF, EIA, ESM&RS, SAAD.			
Controlled activities: irrigation with waste water	IEMF, EIA, ESM&RS, SAAD.			
<p>Discharging of waste or water containing waste into a water resource</p> <ul style="list-style-type: none"> <li>• Domestic</li> <li>• Industrial</li> <li>• Including treatment chemicals e.g. to clean canals</li> </ul>	IEMF, EIA, ESM&RS, SAAD.			
Water and sanitation schemes	IEMF, EIA, ESM&RS, SAAD, Construction EM&AP.			
Maintaining policy and strategies	EIMP, IEMF, SAAD.			
Support (capacity building)	EIMP, IEMF, SAAD.			
Regulation and intervention	EIMP, IEMF, SAAD.			
Information management	EIMP, IEMF, SAAD.			
<p>Monitoring and auditing</p> <ul style="list-style-type: none"> <li>• Monitoring and evaluation</li> <li>• Monitoring system for WSDPs</li> </ul>	EIMP, IEMF, EIA, SEA, ESM&RS, SAAD, Construction EM&AP, EM&AP, checklists.			

## FORESTRY

FUNCTION	POTENTIAL APPLICABLE TOOLS	WHICH TOOLS ARE RELEVANT/ REQUIRED?	WHICH TOOLS HAVE BEEN USED?	NON-COMPLIANCE DETAILS AND RECOMMENDATIONS
Facilitating and supporting community forestry	EIMP, IEMF, SAAD			
Development of industrial / commercial forestry sector <ul style="list-style-type: none"> <li>• Small scale growers in forestry sector</li> </ul>	EIMP, SEA, IEMF, SAAD			
Managing DWAF owned woodlots	IEMF, EIA, ESM&RS, SAAD.			
Support development of new afforestation both commercial and community needs	EIMP, IEMF, EIA, SEA, ESM&RS, SAAD			
Policy development: <ul style="list-style-type: none"> <li>• Policy and guidelines on state forest access</li> </ul>	EIMP, IEMF, SAAD			
Regulations – licences, servitudes on state forest areas	EIMP, IEMF, SAAD			
Sustainable management of natural forests	EIMP, IEMF, EIA, ESM&RS, SAAD, EM&AP, checklists			
Development of a Forest Resource Information System to support decision making in respect of forestry, to produce a national document on the “State of the Forests” and to monitor change on the sustainable management of forests.	EIMP, IEMF, SAAD, EM&AP, checklists			
National forest type classification contributing to management planning	EIMP, IEMF, SAAD			
National Forestry Inventory	EIMP, IEMF, SAAD			
Forest protected areas system planning – conservation targets, analysis of forest patches for conservation value.	EIMP, IEMF, EIA, SEA, SAAD, EM&AP, checklists			
Fire management	EIMP, IEMF, SAAD, EM&AP, checklists			

**APPENDIX D: EIA AUDIT EFFECTIVENESS**

<b>NUMBER</b>	<b>AUDIT QUESTION</b>	<b>RELEVANT?</b>	<b>HAS THE TARGET / OBJECTIVE BEEN MET?</b>	<b>PREVIOUS AUDIT RESULTS</b>	<b>NON-COMPLIANCE DETAILS AND RECOMMENDATIONS</b>
1	Was screening and scoping carried out as part of the EIA process? Was this completed to a suitable standard?				
2	Was the EIA carried out at the correct phase in the project life-cycle (i.e. before the planning or decommissioning phases)?				
3	Are the reasons for the development clearly outlined in the EIA?				
4	Does the EIA provide enough detail and is it adequate in scope, to ensure that sound decisions can be made based on its content?				
5	Is there enough information of sufficient quality to effectively communicate the environmental constraints and requirements of the project? Has such communication taken place?				
6	Have all potential environmental impacts been appropriately dealt with?				
7	Are all the environmental standards, both legislated and best practise, current and accurate?				
8	Are all the measures for mitigating impacts, clear,				

NUMBER	AUDIT QUESTION	RELEVANT?	HAS THE TARGET / OBJECTIVE BEEN MET?	PREVIOUS AUDIT RESULTS	NON-COMPLIANCE DETAILS AND RECOMMENDATIONS
	feasible, necessary and cost-effective?				
9	Have all possible alternatives been considered in terms of the types and severity of potential impacts?				
10	Is the baseline information in the EIA reliable, and are the assumptions accurate?				
11	Are the environmental monitoring and auditing programmes appropriate and comprehensive enough to ensure that environmental objectives will be met?				

**APPENDIX E: EMP AUDIT EFFECTIVENESS**

<b>NUMBER</b>	<b>AUDIT QUESTION</b>	<b>RELEVANT?</b>	<b>HAS THE TARGET / OBJECTIVE BEEN MET?</b>	<b>PREVIOUS AUDIT RESULTS</b>	<b>NON-COMPLIANCE DETAILS AND RECOMMENDATIONS</b>
1	Is the EMP practical and implementable?				
2	Does the EMP cover all phases of the project?				
3	Does the EMP provide enough detail for each project phase, to ensure that the environmental objectives are met (e.g. legislative compliance)?				
4	Does the EMP address all components of the environment – biophysical and social?				
5	Does the EMP indicate who is responsible for each section of the plan, and what communication channels should be followed?				
6	Are all the environmental standards, both legislated and best practise, current and accurate?				
7	Are all the measures for mitigating impacts, remedying pollution and rehabilitation, feasible, necessary and cost-effective?				
8	Would the implementation of the EMP ensure legislative				

<b>NUMBER</b>	<b>AUDIT QUESTION</b>	<b>RELEVANT?</b>	<b>HAS THE TARGET / OBJECTIVE BEEN MET?</b>	<b>PREVIOUS AUDIT RESULTS</b>	<b>NON-COMPLIANCE DETAILS AND RECOMMENDATIONS</b>
	compliance and adherence to organisational environmental policies?				

## APPENDIX F: EMS AUDIT CHECKLIST

E M S audits are used to check the performance of an EMS against its own format, policy, objectives and targets. The following checklist can be used to guide an internal, first party, EMS audit.

No.	CHECKLIST QUESTION/ ISSUE	RELEVANT?	HAS THE TARGET / OBJECTIVE BEEN MET?	PREVIOUS AUDIT RESULTS	NON-COMPLIANCE DETAILS AND RECOMMENDATIONS
1	How does DWAF identify legal requirements that are applicable to the environmental aspects of its activities?				
2	Does DWAF subscribe to any requirements, such as industry codes, business principles, or other voluntary standards, that are related to the environmental aspects of its activities?				
3	Does management provide resources essential to the implementation and control of the environmental management system? E.g. specialised skills, technology and financial resources.				
4	Has DWAF considered whether it will proactively communicate with interested external parties on its significant environmental aspects? What has been the outcome of this consideration? Where is that outcome recorded?				
5	How does DWAF identify significant environmental aspects of the goods and services it uses? Has DWAF established procedures related to identified significant environmental aspects of goods and services it uses?				
6	Does DWAF have an EMS policy?				
7	Is the EMS suitably structured and are responsibilities clearly defined?				
8	Does DWAF undertake training awareness and assess competence?				
9	Are the channels of communication related to the EMS effective?				
10	Is documentation related to the EMS				

	complete and appropriately controlled?				
12	Are the operational aspects of the EMS suitably controlled?				
13	Are emergency preparedness procedures related to the EMS in place?				
14	Have the recommendations of previous EMS audits been followed?				
16	Does DWAF have established and maintained procedures to identify the environmental aspects of its activities that it can control and over which it can be expected to have an influence, in order to determine those which have or can have significant impacts on the environment?				
17	Does DWAF ensure that the aspects related to these significant impacts are considered in setting environmental objectives and keep this information up to date?				
19	Has DWAF established and do they maintain a procedure to identify and have access to legal and other requirements to which they adhere, that are applicable to the environmental aspects of their activities?				
20	Has DWAF established and do they maintain documented environmental objectives and targets, at each relevant function and level within DWAF?				
21	When establishing and reviewing its objectives, does DWAF consider the legal and other requirements, its significant aspects, its technological options, and its financial, operational, and business requirements, and the views of interested parties?				
22	Are the objectives and targets consistent with the environmental policy?				
23	Has DWAF established and does it maintain programmes for achieving its objectives and targets, including designation of responsibility for achieving objectives and targets at each relevant function and level?				
24	Has DWAF established, and do they maintain a program for achieving their objectives and targets including the means and time-frames by which they are to be achieved?				
25	Have programs been amended where relevant to ensure that environmental management applies to projects that relate to new development and new or modified activities?				

**APPENDIX G: AUDIT CHECKLIST FOR INSTITUTIONAL ENVIRONMENTAL ISSUES**

Number	Checklist Question/ Issue	Frequency	Relevant?	Has the target / objective been met?	Previous Audit results	Non-Compliance Details And Recommendations
<b>Integrated Environmental Management (IEM) Indicators</b>						
1	Multi-lateral environmental agreements					
2	Budgetary allocation to biodiversity conservation					
3	Budgetary allocation to environmental education					
4	Budgetary allocation to environmental research					
5	Inclusion of IEM principles into strategic planning initiatives					
6	Conciliation cases					
7	Voluntary adoption of environmental management systems					

8	Voluntary use of environmental accounting and reporting					
9	Capacity for environmental management					
10	Environmental reporting by government departments					
<b>Environmental Governance</b>						
11	Has DWAF audited its plans, policies and programmes for adherence to the NEMA principles?					
12	For each of the following, is there a current, adopted plan that is integrated and aligned to the IDP?: Air Quality, Integrated Waste Management; Oil Spill Contingency; Water Services Development ; plan to provide access to basic water services; and an Invasive Species monitoring, control and eradication plan.					
13	Are DWAF's environmental					

	management policies, plans and tools aligned to the National Biodiversity Strategy and the Bioregional Plan?					
14	Has DWAF officially adopted the Agenda 21 process?					
15	Is there an approved implementation plan for Agenda 21?					

**Forestry Policy**

16	Regular reports to the Minister by the NFAC					
17	Regular reports by the Minister to parliament on facts and trends in forest management					
18	Renewal and updating of NFAP by the Minister					
19	Compliance with sections 39(1) and 40(1) of the National Water Act (afforestation permits)					
20	Compliance with sections 21 and 22 of the Environment Conservation Act (EIAs)					

21	Compliance with section 7 of the National Forest Act (prohibition of destruction of trees in natural forests)					
22	Number of forest graduates from forest training institutions, according to race & gender					
23	Number of refereed forest management articles in accredited journals from SA research institutions					
24	DWAF Forestry Chief Directorate Budget					
25	Overall capital investment in forest industry					
26	Compliance by DWAF with NEMA's EI&MP requirements					
27	Effective participation by DWAF in CEC					

**APPENDIX H: CHECKLIST FOR MONITORING FORESTRY PERFORMANCE**

This checklist can be adapted for use in various forestry related monitoring programmes.

<b>NUMBER</b>	<b>CHECKLIST QUESTION/ ISSUE</b>	<b>FREQUENCY</b>	<b>RELEVANT?</b>	<b>HAS THE TARGET / OBJECTIVE BEEN MET?</b>	<b>PREVIOUS AUDIT RESULTS</b>	<b>NON-COMPLIANCE DETAILS AND RECOMMENDATIONS</b>
<b>Social</b>						
1	Are systems in place to control access to and use of forests, and forest managers have the capacity to monitor and ensure compliance with management systems?					
2	Is an effective process implemented to enable stakeholders to have input into decisions regarding forest management, and sharing of costs and benefits of forests?					
3	Is information and documentation collected and maintained on the identity, location and socio-economic characteristics of all stakeholders living in the vicinity of the forest or claiming rights to the forest?					
4	What is the number of visitors per annum to forests and the proportion of forestry sites available for recreation and tourism, which are impacted unacceptably by visitors?					

5	Are appropriate mechanisms in place to identify, mitigate, resolve grievances and provide fair compensation for the impacts of forestry activities on stakeholders?					
6	Does decision making around sustainable forest management reflect output from stakeholder meetings, and is there evidence of both agreements involving local communities in co-management responsibilities and actions and responses taken in forest management?					
7	Do forest management plans reflect a sensitivity to the impacts of forestry on sense of place and landscape integrity and aim to reduce these impacts?					
8	Is there evidence of a reasonable level of public satisfaction with forest management and information regarding forest management and outcomes of monitoring and research is accessible to all stakeholders?					
9	Is there evidence of mechanisms developed to include marginalised groups, especially women, in decision making?					
10	Do employment and business strategies benefit local people and contribute to local economic					

	development?					
11	Do people invest in their surroundings (i.e. time, effort and money) and link their and their children's future with the management of forest resources?					
12	Do forests act as a contributor or detractor to local or regional identity and to the aesthetics and amenity value of a local place or region?					
13	Are the impacts of globalisation and its relationship to the forestry industry monitored, with particular reference to its impact on Local Economic Development?					
14	Is there evidence that forestry and the forestry industry is playing a developmental role in local and regional areas?					
15	Are tenure and forest rights are clearly defined and respected?					
16	Do stakeholders perceive rights of access to and use of forests to be fair?					
17	Are sites of cultural, ecological, economic and religious significance clearly identified and managed in cooperation with stakeholders?					
18	Do opportunities (strategies) exists for local and forest dependent people to receive reasonable benefits from forestry through employment,					

	training, and other services related to forest enterprises?					
19	Do effective mechanisms exist for communication, negotiation, and decision making related to forest management among all stakeholders?					
20	Are strategies implemented that meet or exceed all applicable laws and/or regulations covering health and safety of employees, their families and the broader public?					
21	Are education and awareness raising activities (programmes) in place to create an increased awareness of the necessity of sustainable forest management among the general public?					
22	What is the number of people dependent on the forest for subsistence uses, livelihoods and traditional and customary lifestyles?					
23	What forest industry interest groups are involved?					
24	What are the details regarding forest ownership and / control - Distributions in time, space and social representation?					
<b>Environmental</b>						
25	Is there a map of natural evergreen forest (indicating forest type,					

	ownership & conservation status)?					
26	Is there a database of natural evergreen forest (indicating province, forest type, ownership, conservation status, and FMU of each forest >2 ha in size)?					
27	Have the Forest Act regulations for protection of forests been consulted?					
28	Is there an inventory of forest resource needs?					
29	Does forest land use form part of regional and sub-regional plans?					
30	Have forest types been identified and described?					
31	What is the conserved proportion of each forest type?					
32	Is fire controlled in the forest environment?					
33	What is the ratio of recruitment of harvested species?					
34	Is the viability of gene flow patterns and processes within the system maintained?					
35	Do nutrient cycling processes continue uninterrupted?					
36	What proportion of forest edges are in good condition (gradual or soft, & functional)?					
37	Is there a list of species in need of special protection (is maintained)?					

38	What are the control measures of inappropriate resource use (harvesting, hunting, fishing, trapping, collecting, etc.)?					
39	What is the status of gene pool & flow of key species?					
40	What is the status of development of alternative resources (to satisfy demands for natural forest products in limited supply, i.e. through coppice systems, cultivation outside the forest)?					
41	What is the level of promotion of indigenous tree species (for their economic, social and environmental value)?					
42	What is the status of SEA, EIA & IEM in developments affecting natural forests?					
43	What is the status of control of invasive alien species (practices, their potential facilitation of restoration of natural evergreen forest)?					
44	What are the harvesting rates & levels of resource use (in relation to production rates of the forest and target species [recruitment, growth & mortality])?					
45	Is planning and monitoring of harvesting levels according to species specific biology and socio-					

	economic cost-benefit analysis taking place?					
46	What is the harvesting cycle of resource use (consider production rates, ecological requirements of target species, harvesting costs, and potential social impacts)?					
47	What is the level of diversified, multiple resource use?					
48	What is the level of product output versus waste from harvested resources (maximizes product output and minimizes waste, such as utilising timber, branchwood & bark from harvested trees, or utilising both pulp and seeds of forest fruits, where appropriate)?					
49	What are the levels of forest protection (from illegal harvesting, settlement and other unauthorized activities)?					
50	Is there a documented resource use plan?					
51	Is there a policy framework to guide diverse resource use (in line with national and provincial laws and regulations)?					
52	Is there a statistically acceptable resource assessment?					
53	Is there a monitoring plan for resource use impacts?					

54	Is there a plan and budget for relevant ecological and socio-economic research?					
55	Is there a plan and budget for appropriate training and capacity building (for acceptable resource management practices)?					
56	What is the area under Forest - Indigenous Forest and Plantations (Forest type, Age class distribution, Area Temporary Unplanted, New Afforestation / Deforestation)?					
57	What is the situation regarding the forest Management Systems and Audits?					
58	What is the situation regarding Forest Protection - Fire, Biological organisms, pollution?					
59	What is the situation regarding Biological Diversity - Type/Species distribution, Protected areas, Patch size /Edge to Area?					

**APPENDIX I: EMP COMPLIANCE CHECKLIST**

This checklist is to be used as a guideline, from which a checklist should be drawn up for the specific EMP.

NUMBER	EMP MITIGATION MEASURE	FREQUENCY	RELEVANT?	HAS THE TARGET / OBJECTIVE BEEN MET?	PREVIOUS AUDIT RESULTS	NON-COMPLIANCE DETAILS AND RECOMMENDATIONS
<b>Soil</b>						
1.	Topsoil to be stored					
2.	Manner of stockpiling soil, e.g. no compaction					
3.	Soil not stockpiled on drainage lines					
4.	No soil imports					
5.	Limit vehicle access over rocky outcrops					
6.	Don't use equipment displaying oil and fuel leaks					
7.	Removal of contaminated soils					
<b>Water</b>						
8.	No development within 1: 50 year floodline					
9.	Don't impede natural water flow					
10.	Sedimentation control measures at watercourse crossings					
11.	Use of in-stream diversions when working in watercourses					
12.	Control of pollution entering watercourse					
13.	Avoid swimming and personal ablutions in watercourses					
14.	Use of groundwater strictly prohibited					
15.	Stormwater management system provided and maintained					
<b>Air</b>						

NUMBER	EMP MITIGATION MEASURE	FREQUENCY	RELEVANT?	HAS THE TARGET / OBJECTIVE BEEN MET?	PREVIOUS AUDIT RESULTS	NON-COMPLIANCE DETAILS AND RECOMMENDATIONS
16.	Speed limits on all roads on site					
17.	Regular dust suppression on site (roads and stockpiled soil)					
18.	Notification of IAPs in the close vicinity of construction					
19.	Inform nearby IAPs of noisy after hours work					
20.	No site fires allowed					
<b>Social and Cultural</b>						
21.	Prevent casual access to construction site					
22.	Compensation for damage to property					
23.	Inform landowner of any planned damage to properties					
24.	Maintenance of photographic record of damage					
25.	Housing of labour force					
26.	All conditions binding upon sub-contractors					
27.	Limit construction workers access to private property					
28.	Inform SAPS of any crimes on site					
29.	Inform employees about site specific environmental risks					
30.	Contractor's employees to be clearly identifiable					
<b>Aesthetics</b>						
31.	Limitation of damage to visual impressions of the area					
32.	Above ground structures to blend with the environment as far as possible					

NUMBER	EMP MITIGATION MEASURE	FREQUENCY	RELEVANT?	HAS THE TARGET / OBJECTIVE BEEN MET?	PREVIOUS AUDIT RESULTS	NON-COMPLIANCE DETAILS AND RECOMMENDATIONS
33.	No access roads wider than four meters					
34.	Recording of complaints regarding site appearance					
<b>Archaeology and Cultural Sites</b>						
35.	Finds of human remains reported to the SAPS/SAHRA					
36.	Avoid graveyards					
37.	Work ceased when buried artefacts discovered					
38.	Fenced erected to protect archaeological sites					
39.	No employee access to identified archaeological and cultural sites					
<b>Flora</b>						
40.	Rare flora seeds to be stored at a nursery					
41.	Protected plants tagged prior to construction					
42.	Limit felling of trees					
43.	Alien or invader plants to be removed					
44.	Documentation of damage to priority and riparian plants					
45.	Use of approved flora in rehabilitation					
46.	No damage to flora outside of works footprint					
47.	Grass seeding following proper procedures					
<b>Fauna</b>						
48.	No poaching of animal species					
49.	No fishing permitted					
50.	Anthills not to be disturbed					
51.	Recording of incidents regarding disturbance of					

NUMBER	EMP MITIGATION MEASURE	FREQUENCY	RELEVANT?	HAS THE TARGET / OBJECTIVE BEEN MET?	PREVIOUS AUDIT RESULTS	NON-COMPLIANCE DETAILS AND RECOMMENDATIONS
	animals					
52.	Bird nesting sites not disturbed					
<b>Infrastructure</b>						
53.	Notification of interruptions of service due to construction					
54.	No fences or gates interfered with					
55.	Protection to exposed pipelines					
56.	Telephone poles not interfered with					
57.	Complaints of damage to infrastructure recorded					
58.	Proper storage facilities for site requirements					
59.	Adequate precautions regarding traffic control					
60.	Appropriate signs displayed					
61.	Traffic to use actual development main road					
<b>Safety &amp; Security</b>						
62.	Care regarding flashover of overhead power lines					
63.	Protection of workers during thunder storms					
64.	Fire prevention measures					
65.	Periodic checking of open excavations					
66.	Perimeter fencing erected and maintained					
<b>Waste</b>						
67.	Sanitation facilities to be installed on site (adequate quantity)					
68.	Suitable litter receptacles provided					
69.	Prohibition of littering					
70.	Waste disposal at registered landfill site					
71.	Chemical spills contained and cleared up					

NUMBER	EMP MITIGATION MEASURE	FREQUENCY	RELEVANT?	HAS THE TARGET / OBJECTIVE BEEN MET?	PREVIOUS AUDIT RESULTS	NON-COMPLIANCE DETAILS AND RECOMMENDATIONS
72.	Vehicles serviced within designated areas on site					
73.	Cement mixed in allocated areas					
74.	Mitigation of spillage from elevated fuel tanks					
<b>Rehabilitation and Site Clearance</b>						
75.	Site specific rehabilitation plan complied					
76.	Rehabilitation of 2 drainage lines on site					
77.	Access roads rehabilitated on completion					
78.	All construction residue removed after construction					
79.	Indigenous trees replanted					
80.	Borrow pits reshaped to even surfaces and closed off					
81.	Indigenous vegetation mix used in rehabilitation					
82.	Scarify areas compacted by vehicle movements					
83.	Site specific instruction regarding closure followed					

## APPENDIX J: CHECKLIST FOR MONITORING PEST CONTROL OPERATIONS

The purpose of this checklist is for the highly specialised monitoring of DWAF's pest control operations.

NUM BER	CHECKLIST QUESTION/ ISSUE	RELEVANT?	HAS THE TARGET / OBJECTIVE BEEN MET?	PREVIOUS AUDIT RESULTS	NON-COMPLIANCE DETAILS AND RECOMMENDATIONS
1	What is the objective / target of the pesticide application? When will these be reviewed?				
2	What is the objective / target of the monitoring? When will these be reviewed?				
3	How will the abovementioned objectives and targets be achieved?				
4	What are the legal requirements regarding the proposed pesticide use?				
5	Have the views of interested and affected parties planning parties been obtained? What aspects of these views must be borne in mind when carrying out the pesticide application?				
6	What are DWAF's environmental goals regarding pesticide use? Are the targets and objectives in line with these goals?				
7	Have responsibilities been allocated for each level and function relating to the pesticide application? Are all personnel suitably qualified?				
8	What communication procedures are in place?				
9	Is there an EMS or EMP in place?				
10	Are there sufficient resources for the pesticide application?				
11	What type of pesticide was used?				
12	How often will the pesticide be applied?				
13	What quantity of pesticide will be applied?				
14	For what purpose was the pesticide developed?				

	Will it be used for its intended purpose?				
15	What potentially harmful substances are present? If relevant, include details about the effects of dilution and the time taken for the harmful substances to break down.				
16	What are the potential effects of this pesticide? List all possible effects, including cumulative effects and effects due to potential interactions with other substances. Also list which species could be affected, how they may be affected, and what their tolerance level is for the harmful substances.				
17	Were fact sheets and instructions obtained from the supplier of the pesticide?				
18	Was the person appointed to carry out the pesticide application appropriately trained for the particular pesticide?				
19	What safety equipment is required while applying the pesticide? Has this equipment been obtained / maintained? Has the person applying the pesticide been trained in how to use the safety equipment?				
20	What are the water quality targets for the water in the dam to be treated?				
21	What substances in the water (from the pesticide or its interactions) will be monitored?				
22	Where are the monitoring points? Provide a map and details about why these points were chosen.				
23	How often will water quality samples be taken?				
24	What sampling methods will be used?				
25	How will the water samples be analysed?				
26	Who will analyse the water samples and what qualifications do they have?				
27	How will the results of the sample analysis be presented? Will they be analysed statistically?				

28	Who will the results be presented to?				
29	How will the documentation and records be maintained?				
30	Are all relevant personnel aware of the potential impacts of the pesticide application, their roles, the contents of the EMP/EMS?				
31	What type of reporting system is in place?				
32	Have the water quality targets been met? Attach a list of the results for each monitoring point.				
33	What negative impacts from the pesticide use have been identified from the water analysis? Are these impacts acceptable?				
34	How will incidences of non-conformance be handled?				
35	What are the procedures for implementing corrective actions? Provide documentation of any corrective actions taken.				
36	What mitigation measures should be put in place to reduce the impacts of pesticide use in future?				
37	What, if any, alternatives to pesticide use have been explored?				
38	What were the results of alternative methods tested?				

### APPENDIX K: CHECKLIST FOR AUDITING PEST CONTROL OPERATIONS

As with the checklist for monitoring pest control, this is a highly specialised checklist for auditing various pest control operations.

NUMBER	CHECKLIST QUESTION/ ISSUE	RELEVANT?	HAS THE TARGET / OBJECTIVE BEEN MET?	PREVIOUS AUDIT RESULTS	NON-COMPLIANCE DETAILS AND RECOMMENDATIONS
1	Were pesticide monitoring checklists completed in full?				
2	Were the targets set for pesticide application and monitoring suitable? Were the targets reviewed?				
3	Were the targets / objectives achieved?				
4	Was public participation carried out and were the public's views taken into account?				
5	Were the pesticide application projects in line with legislation and DWAF's environmental goals?				
6	Were appropriate communication procedures used?				
7	Were EMSs or EMPs in place and were these complied with?				
8	Were there sufficient resources for the pesticide applications?				
9	Was the type, quantity and interval of				

	pesticide application suitable? List these.				
10	Was the pesticide used as intended?				
11	Were details obtained regarding the harmful substances and potential effects of the pesticides?				
12	Was information obtained from the supplier about the pesticide?				
13	Was appropriate equipment used and was it properly maintained?				
14	Were the water quality monitoring points in suitable places?				
15	Were there sufficient monitoring points?				
16	Were the monitoring time intervals acceptable?				
17	Was the person appointed to carry out the monitoring appropriately qualified? Was suitable training undertaken? Were other personnel appropriately qualified and trained?				
18	Were the water quality targets identified, for different types of water use, for the substances to be tested?				
19	Were the substances to be tested for correct based on the pesticides used?				
20	Was the person / agency who analysed the				

	samples suitably qualified?				
21	Were water quality targets met after pesticide use?				
22	Were the water quality results appropriately analysed and were the results presented to the correct people?				
23	Analyse the water quality results to determine any trends.				
24	Was a suitable type of reporting system in place?				
25	Were the documentation and records properly maintained?				
26	Were all personnel aware of their roles as well as the contents of the EMS/EMP?				
27	Were the water quality targets met? If they were not met, was suitable corrective action carried out?				
28	Were mitigation measures designed to reduce the impacts of pesticide use?				
29	Were alternatives to pesticide use explored?				
30	Were the results of alternative methods tested and appropriately analysed?				
31	Were the expected cumulative impacts of pesticide use identified? Were these acceptable?				

